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30 April 1984

Worldwide Report

EPIDEMIOLOGY

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WORLDWIDE REPORT

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CONTENTS

HUMAN DISEASES

STUDY REVEALS ALARMING STATISTICS ON CHAGAS' DISEASE

Buenos Aires LA NACION in Spanish 18 Mar 84 p 18

[Text] Resistencia. Some 35 percent of the productive population in the province is affected by Chagas' disease, as reported in studies carried out by the senators from El Chaco, Dr Luis Agustin (UCR) and notary Deolindo Felipe Bittel (PJ), who will reportedly present a bill in which hopes are expressed for beginning to reverse the situation.

'Dramatic Problem'

In a statement issued in this capital, the legislators report that approximately 1.5 million workers nationwide are infected and describe Chagas' disease as "a dramatic problem and a serious source of disruption for productive activity in vast areas of the country."

On the subject of El Chaco, according to studies done on citizens called up for military service, it is the province hit hardest by the disease inasmuch as 39 percent of those examined from the class of 1951 and about 30 percent of the class of 1963 are affected, thus about 35 percent of the province's productive population.

Nationwide, the statement continues, the situation is not encouraging either because the proportion of those infected may be estimated at about 8 or 9 percent of the overall population, which amounts to a figure of approximately 2.5 million people. It explains that being infected does not mean being sick. It is estimated that perhaps 20 percent of those infected will become ill, i.e., will suffer ill effects of greater or lesser seriousness. The remaining 80 percent quite probably will undergo no change throughout their lives.

Bill

Senators Leon and Bittel state that to resolve this situation which constitutes a threat to everyone it was decided to prepare a bill which views Chagas' disease from the same point of view as natural disaster situations and leads society as a whole in assuming a mutually binding commitment. Therefore, they explain, we shall have to start a labor insurance system designed to

cover the situation of approximately 1.5 million workers infected by Chagas. Efforts will therefore be made to bring about the inclusion of these workers in the scheme, freeing the employer from legal involvement directly derived from the disease but prevailing upon him to participate in a system ensuring the affected person medical-professional-security coverage adequate for his own health situation. In this way the worker infected by Chagas will be able to work for his own livelihood on an equal footing and will enjoy assistance and security coverage and which views his uneven situation impartially.

Nationally famous specialists and the international scientific committee are collaborating in research on Chagas' disease.

9436
CSO: 5400/2051

FAILURE OF CAMPAIGNS AGAINST CHAGAS' DISEASE NOTED

Buenos Aires LA PRENSA in Spanish 22 Mar 84 p 6

[Text] Out of an approximate total of 2.5 million people infected by Chagas' disease, the two national senators for El Chaco province have estimated that 1.5 million workers are infected. They announced that they are preparing a bill which will look upon the disease from the same viewpoint as natural disaster situations and that will lead society on the whole to assume a binding commitment. The bill would reportedly consist of, among other points, creating a labor security system designed to protect the situation of those infected. Chagas' disease has been developing in the country for more than a quarter of a century; and 17 years ago the national campaign against Chagas' disease was begun, to which the collaboration of the World Health Organization and Pan American Health organization was subsequently added, and receives aid, in addition, from the Under-secretariat for Science and Technology and from the National Scientific and Technical Research Council. On several occasions official statements on major campaigns to combat the disease abounded; large sums of money were invested and personnel mobilized, but the illness is progressing. Resources earmarked for defensive action against Chagas' disease were 6,219,200 pesos in 1981; 12,441,200 in 1982, and 40,054,400 in 1983. An official report issued last June shows that the system had 170 diagnostic laboratories in service in 30 centers covering 14 provinces, with 247 doctors and 71 biochemists. It would be of considerable interest to find out whether those sums were invested in salaries paid to technical and administrative personnel assigned to the program or how the funds were otherwise distributed; because the results from the heralded campaigns have apparently not produced the benefits expected in a national effort. The labor insurance proposed will not solve the problem by itself, a problem which will have to be dealt with in accordance with conventional, established principles: the improvement and construction of housing, home disinfection in ranches and other affected units, and in popular education with clear and specific information on the risks from an epidemic, without detriment to official aid in materials and guidance in construction as had been planned previously.

The need for the state to provide funds for overall action against the scourge is clear and for it to be carried by the best qualified elements in science and technology. At the same time disproportionate expenditures will have to be avoided and periodic accounting given on developments in and results from the respective health campaigns. Otherwise, the country will have to go on suffering from the effects of this disease which has now reached serious proportions.

9436
CSO: 5400/2051

VIRUS OUTBREAK REPORTED IN NORTH

Perth THE WEST AUSTRALIAN in English 25 Feb 84 p 5

[Text]

MORE than 200 people have been affected by an outbreak of Ross River disease in northern parts of Australia this year with 24 cases in the Murchison and Pilbara areas.

The outbreak has prompted the Public Health Department to issue warnings to people living or camping in the North-West to protect themselves against bites of mosquitoes, which transmit the disease.

A department spokesman said that the latest outbreak seemed to be more widespread and intense than others.

Little was known about how the disease was transmitted except that two types of mosquitoes seemed to carry the virus, he said.

It was not known why this outbreak was more widespread.

The disease rarely killed, but it caused discomfort for one or two weeks, the spokesman said.

The first symptoms were usually pains in muscles and joints. These were followed by the development of arthritis that most commonly affected ankles, fingers, knees and wrists.

A widespread non-itchy rash was common and in some cases victims developed a fever.

Council health surveyors were assessing local mosquito-breeding patterns.

They were organising mosquito-control programmes with Public Health Department support. The best preventative measure was protection against bites, the spokesman said.

Warnings were issued to people living in the Murchison, Pilbara and Kimberleys. Houses should be adequately screened and people should stay indoors in the early evening when mosquitos were most active.

Dr Graham Denner said in Carnarvon yesterday that the outbreak in the Murchison area was worse than in other years.

"It is not a dangerous disease, but we have had quite a few cases in areas such as Meekatharra and Wiluna this year and normally we have sporadic cases," he said.

CSO: 5400/4406

BRIEFS

CHOLERA DEATHS REPORTED--Syed Azizul Huq Nanna Mia and Mohammad Abdul Khaleque, President and General Secretary of the proposed Baker-ganj divisional samiti called upon the government to take adequate measures to arrest cholera in a number of thanas under Pirojpur district. In a statement to the press yesterday they said that according to a daily newspaper about 50 persons died of cholera in Mathbaria thana and its adjacent areas recently. They urged the Government to send anticholera medicines, saline, injection, and drinking water to the affected areas. [Text] [Dhaka THE NEW NATION in English 21 Mar 84 p 1]

CHICKENPOX OUTBREAK--Barisal, March 20--Chicken Pox has broken out in the district in epidemic form. A good number of people have been attacked with Pox this time. It is learnt that the children are the worst affected. Health Department of Barisal Pourashava is inactive to control the pox, it is alleged. [Text] [Dhaka THE NEW NATION in English 22 Mar 84 p 2]

CSO: 5400/7094

BRIEFS

MORE ON DENGUE FEVER--An outbreak of Dengue Fever in Belize has elicited a cautious statement from the Minister of Health, Mr Assad Shoman, to the effect that Shoman suspected cases of Dengue had come to the notice of Health Authorities. From all unofficial accounts, the situation is much worse, and there may be hundreds of people in Belize City right this minute with Dengue Fever. At least one Medical Officer has been stricken with it. Dengue Fever, like Malaria, had been all but wiped out in Belize, and the return of Dengue to this country is a massive setback to this valuable eradication work that had gone on before. [Editor's Note: In a related report, the Belize City DISWEEK in English, 23 March 1984, page 10, said that the "Ministry of Health has confirmed that there is evidence to indicate the possible presence of dengue fever in Belize with 17 suspect cases country wide."] [Excerpt] [Belize City THE REPORTER in English 25 Mar 84 p 1]

CSO: 5400/7554

STUDY OUTLINES INCIDENCE OF DISEASES PREVAILING IN NORTHEAST

Rio de Janeiro JORNAL DO BRASIL in Portuguese 1 Apr 84 p 21

[Text] Recife--Four million people suffering from schistosomiasis, 3 million suffering from Chagas disease, 17,000 new cases of tuberculosis a year, 340 deaths per 1,000 live-born infants in the first year of life. These numbers describe the health situation in the Northeast, where 66 percent of the rural infant population--that between 1 and 5 years of age--suffers from the effects of malnutrition.

These figures are contained in an 11-page document drafted under the direction of the Ministry of Health by technicians from various bodies, including the SEPLAN [Secretariat of Planning], Ministry of Welfare and Social Security and the SUDENE [Superintendency for Development of the Northeast]. This report has been discussed exhaustively in Recife in the past 3 days by the health secretaries of the region, representatives of various ministries and even international bodies, such as the World Bank and the UNICEF. The document further indicates that only 6 percent of the rural population is disposing of waste in adequate fashion, while only 12 percent of the residents in settlements with up to 2,500 inhabitants have water supply service (with or without home supply).

Causes of Death and Vaccinations

According to the analysis set forth in the document, 23.2 percent of the deaths among infants under 1 year of age were the result of infectious diseases (as compared to 8.1 percent in the South), while 58 percent of the infant population between 1 and 5 years of age also suffers from malnutrition in the urban areas. But the report says that only 59 of the 1,375 municipalities in the Northeast (4.3 percent) lack health services, "a situation which from the purely quantitative point of view is relatively satisfactory."

However, only 20 percent of the health posts included in the Program for Health and Sanitation Activities in the Interior (PIASS) network engage in food supplementation activities. Moreover, coverage in the routine vaccination program against measles, tetanus, whooping cough and diphtheria--"a basic task of these units"--did not benefit even 50 percent of the target population in 1983. This document shows a housing shortage of 1 million units, and reports that "67.6 percent of the teachers in the rural area of the Northeast have not completed the first educational level."

At the end of the meeting, which was attended by the secretary general of the Ministry of Health, Mozart Abreu de Lima, and the United Nations Children's Fund adviser on infant health, Aaron Lechtig, basic principles for health activities (universalization and equity, decentralization and integration) were approved, and the basic activities based on the Northeast Project areas were established. The most prevalent health problems will have priority. It was decided to bring about greater integration and articulation among the various government sectors.

In the view of the UNICEF representative, the Northeast "situation has reached the extreme."

5157
CSO: 5400/2109

MALARIA OUTBREAK IN SAO PAULO, MATO GROSSO DO SUL BORDER AREA

Rio de Janeiro O GLOBO in Portuguese 28 Mar 84 p 6

[Text] Presidente Prudente--Malaria, which was eradicated from the region many years ago, has again been reported in Panorama, Presidente Epitacio and Rosana, on the boundary between Sao Paulo and Mato Grosso do Sul. Thus far, the Superintendency for Control of Endemic Diseases (SUCEN) has established 16 cases of infection by mosquitos, with one fatality. The victim was Francisco Joaquim do Nascimento, 60 years of age, married and a resident of the Rosana district in the municipality of Teodoro Sampaio.

Because of this outbreak, the SUCEN has been issuing warnings about the substantial number of cases, "with a great possibility of spread to other municipalities." At the same time, it is asking doctors and hospital directors to report all cases of patients with malaria symptoms, who are to be sent immediately for blood and diagnostic testing to the laboratories established in Presidente Prudente, Venceslau, Presidente Epitacio, Rosana, Adamantina, Dracena and Panorama.

Amazon Region

At the opening session of the First Conference on Malaria in Belem, the head of the SUCAM [Superintendency for Public Health Campaigns], Jose Taquarassu Fiuza Lima, said that the disease must be fought "more intelligently."

"We need to work in the areas of greatest incidence and increase our analytical and diagnostic capacity," he said.

He mentioned the case of Para, where malaria has been reported in 80 percent of the 87 municipalities, while only 17 became centers of the disease, and even there, in rather specific areas rather than throughout their territory, as an example of the rationalization of the work which needs to be developed.

The lack of resources and the development of settlement projects leading to an upsurge of unregulated migration were the main causes noted by the regional directors of the SUCAM as explanations for the proliferation of the disease. But the battle against the carrier mosquitos, Fiuza Lima said, will not be threatened this year by the need to import DDT.

"In December we received 1,600 tons of the insecticide, all of which has been distributed to the Amazon region and, with the additional support we obtained from the FINSOCIAL, it was possible to hire new employees. Thus there are already prospects for a reduction in the number of cases beginning in the second half of the year."

5157
CSO: 5400/2109

TB CASES NATIONWIDE TOTAL 88,000 IN 1983

Rio de Janeiro JORNAL DO BRASIL in Portuguese 21 Mar 84 p 6

[Text] The Rio de Janeiro metropolitan area had 13,000 cases of tuberculosis last year, 5 percent more than in 1982, and throughout the country the Ministry of Health recorded 88,000 cases in 1983, which is not considered an alarming number by the ministry.

"What is important is that at the present time we are prepared to combat any type of tuberculosis. Today those figures are accurate whereas formerly we were not in a position to make a correct survey," said Jose do Vale, head of the project to combat TB in Rio de Janeiro.

The data were furnished during the Third Meeting for Evaluation of the State Tuberculosis Control Programs in the Macroregions of the South and Southeast that is being held in the National Institute for Social Security Medical Care headquarters on Mexico Street. According to Miguel Aiub, coordinator of the meeting, at the present time 90 percent of the cases of tuberculosis are treated in 6 months and there is no longer any need for hospitalization.

"Today, people have to be aware that tuberculosis is not a monster. The disease does not represent a risk to the family. After being discovered, well treated, the person can be cured in 6 months. All that is necessary is that he follow the treatment and take the necessary medication," declared Aiub.

The data supplied by Jose do Vale were taken from the survey made by experts of the Ministries of Health, Social Welfare and state secretariats of health. "Those meetings are routine," he explained, "and each year a state is selected as the site, as occurred with Rio this year."

According to Jose do Vale's data, the Escondidinho Hill slum in Rio Comprido was one of the places in Rio where a large number of the cases were found.

8711
CSO: 5400/20055

BRIEFS

MALARIA IN RONDONIA--Porto Velho--An outbreak of malaria in Sao Sebastiao, Abuna district, about 22 kilometers from the capital, prevented a team from the Rondonia Mining Company (CMR) from proceeding with its investigation on the occurence of gold and cassiterite in the region. According to the president of the CMR, Djalma Lacerda, the malaria was brought from a small, neighboring prospecting field on the Bolivian border. Lacerda reported that a geologist, an administrator, a driver and 20 laborers of the team became ill. The company has already requested the help of the Superintendency for Public Health Campaigns in Porto Velho to control the incidence of malaria in the exploration area. The president of the CMR said that the disease is spreading over the area, with greater frequency in the prospecting field of Mutum, Parana and Paredao. Djalma Lacerda received a promise from the Secretariat of Health that a joint action with SUCAM would be undertaken in the area. [Text] [Rio de Janeiro O GLOBO in Portugese 25 Mar 84 p 9] 8711

IMMUNIZATION CAMPAIGN--Brasilia--The application throughout the country of the antimeasles and DPT (diphtheria, tetanus and whooping cough) vaccines coupled with the antiopolio campaign to be carried out in June and August will be defined by the end of this week by the Ministry of Health. Up to the present time, it has been decided to adopt multivaccination in the states of the Northeast, Center West and Rio de Janeiro. As for the South and the rest of the Southeast, the matter will be discussed this week. According to Health Ministry experts, the objective is to vaccinate all of the approximately 18 million children up to 4 years of age in order to reduce the incidence of measles, especially whooping cough and diphtheria which affect about 1 million children every year. Raising the immunization indices in the North, Northeast and Center West is considered essential because the coverage is very low in those areas, ranging between 40 and 60 percent, when it is necessary to vaccinate at least 80 percent of the children in order to maintain the diseases under control. According to preliminary 1983 data, of the so-called children's diseases, measles affected about 55,000 children, causing about 5,000 deaths; diphtheria was confirmed in almost 4,000 children, whooping cough in more than 25,000 and tetanus in about 3,000 children. [Text] [Rio de Janeiro O GLOBO in Portuguese 7 Mar 84 p 2] 8711

REDUCED HEALTH MINISTRY BUDGET--Brasilia--The budget of the Ministry of Health this year will be reduced by 3.3 billion cruzeiros, totaling 313.6 billion cruzeiros, due to the 12 percent cut in treasury appropriations for all

government agencies ordered last December by Decree 2099. The ministry did not make any cuts in allocations to its hospitals because, according to one aide, they are already inadequate and there is, therefore, no room for reduction. The cuts--between 17 and 1 percent--affect all of the secretariats of the ministry. The budget of the secretariat general, for example, was reduced by 17 percent with some of its programs, such as that for blood and hemoderivatives, suffered cuts of 50 percent. [Text] [Rio de Janeiro O GLOBO in Portuguese 3 Mar 84 p 6] 8711

CSO: 5400/2055

FIVE PROVINCES SUCCEED IN MALARIA PREVENTION

OW050855 Beijing XINHUA Domestic Service in Chinese 1424 GMT 4 Apr 84

[By reporter Dong Ying]

[Excerpts] Hefei, 4 Apr (XINHUA) -- According to an experience-exchange and commendation meeting on the occasion of the 10th anniversary of the joint campaign for the prevention of malaria in Jiangsu, Shandong, Henan, Hubei, and Anhui, which concluded in Hefei on 4 April, the incidence of malaria in the five above-mentioned provinces in the past 10 years has dropped from 1974's 13.99 million patients down to 1983's 1.06 million patients. The reduction rate is 92 percent.

Since Jiangsu and the four other provinces engaged in joint prevention work, they have run various technical training classes for 180,000 malaria prevention workers. Armed with professional knowledge, these people have actively engaged in malaria-prevention work for the 300 million people in the vast urban and rural areas covering nearly 700,000 square km in the five provinces.

CSO: 5400/4135

GEOLOGICAL FACTORS IN KASCHIN-BECK DISEASE STUDIED

Changchun CHANGCHUN DIZHI XUEYUAN XUEBAO [JOURNAL OF CHANGCHUN GEOLOGICAL INSTITUTE] in Chinese No 1, 1983 pp 81-88

[Article by Lin Nianfeng [2651 1628 0023] and Yang Jie [2799 3381]: "The Correlation Between Kaschin-Beck Disease and the Geological Environment"]

[Text] I. Kaschin-Beck Disease

Kaschin-Beck disease is a health-threatening endemic disease of arthritic defomation. It is known as Urof's disease in Russian and as the Kaschin-Beck disease in Japan, the latter name being used internationally.

There are many theories regarding the cause of Kaschin-Beck disease, and dozens of factors are alleged to be related thereto in the literature on endemic diseases alone.

The authors participated in the Kaschin-Beck disease investigation in Yongshou County, Shaanxi Province, from 1979 to 1981. Yongshou County, an otherwise representative area in China, has a relatively high incidence of the disease. This paper treats data from the Yongshou investigation statistically and provides highly significant results.

II. Geological Environment and Disease Distribution in Yongshou County

The geomorphism of the Yongshou area may be divided into four areas: the northwestern part is a medium- or low-altitude mountainous area, the vast central part is a loessial terrace, the northeastern part is the Jing Hi high plateau and the southewest area is the Haochou He basin. The loessial terrace consists of three tiers with an altitude difference of approximately 100 meters per tier.

The bedrock of the Yongshou area is buried deep under the loess layer, except for occasional exposures of purplish-red conglomerate of the Cretaceous period in road cuttings, on valley and canyon walls and at the bottom of valleys. Stratigraphic age increases from north to south, and stratigraphic distribution is parallel and belt-like. The sequence is purple shale and a thin stratum of limestone of the Cambrian period, limestone of the Ordovician period,

psammite of the Jurassic period and purplish-red conglomerate of the Cretaceous period. Psammites of the various periods are water-rich and produce 200 tons of water per well per day. Ordovician limestone has a high water content and produces 500 tons per well per day. Fissure springs are often found on exposed bedrock in valleys and canyons. In the loessial terrace region, however, bedrock pressure water can be obtained only by drilling deep wells.

The terrain of this region is characterized by higher altitudes in the north, lower altitudes in the south; but the strata tilt toward the north at an angle of about 5 decrees and form a counterflowing water table. And since the deep-cutting Jing He valley lies in the northeast, the region's groundwater drainage is good, and conditions are not favorable for groundwater storage.

The Yongshou area is characterized by continental climate, little precipitation and much evaporation. The average annual precipitation of 571.6 mm is concentrated in the months of July, August and September. Spring is windy and dry, and rivers dry up in this season. Summer and fall experience flood, and soil erosion is serious. Because of the climate, geomorphic and geological conditions, there is a shortage of surface water; and groundwater reserve is small, deeply buried and fluctuates greatly. Because bedrock fissure water lies at a great depth and bears little pressure, such water is difficult to get and is available only in the form of springs at the bottom of gulches. In the mountains, on ridges and on terrace slopes, springs appear during the rainy season, but these springs have little water volume, their output is highly seasonal, and thus they do not provide sufficient drinking water.

Drinking water is in short supply in Yongshou County. On the loessial terrace such water comes from wells; near gulches and canyons, it comes from springs or streams; on terrace slopes it comes from cellars, and various forms of accumulated surface water such as ponds, pools or pits. In the dry season, river water disappears and cellars dry up. Thus the masses must bring in water from far away, which work is very arduous.

Yongshou County has historically suffered from Kaschin-Beck disease, but the degree of severity varies greatly, and distribution is unusual. There are even some "islands of health." Generally, incidence is higher in mountainous areas and on terrace slopes and lower in river valleys and on the top of the loessial terrace. The masses claim that the disease is related to drinking water: People drinking cellar water and gulch water suffer heavily from the disease, but those who drink spring water are less affected or unaffected. It is further claimed that, since the beginning of cooperatization, more people have taken to drinking cellar water, less people drink spring water, and thus, there has been a noticeable increase in the disease. There was an especially pronounced increase in the number of cases after 1966, when cellars were left unattended, contamination increased and water quality deteriorated. Statistics show that there were 2,042 water cellars in Yongshou County in 1978, which source provided 62.73 percent of the total water supply; that 85-100 percent of the brigades in the 3 communes with the highest incidence of the disease used cellar water as their drinking-water source; and that on the other hand, communes having the lowest incidence largely used well water.

Since 1972, deep wells have been drilled in Yongshou County, spring water has been brought in and water cellars have been gradually phased out. A 1977 county-wide survey of Kaschin-Beck disease showed a distinct downward trend in incidence.

Most of the villages and towns in Yongshou County have existed for several years, and people have lived in the same places for many generations without moving. The county population is 143,800, and the detection rate of Kaschin-Beck disease is 25.49 percent (based on 1977 survey data). The masses' main staples are wheat and corn, which are consumed at a ratio of 1:1. The average grain ration is about 300 jin and in a few cases, 400-500 jin. People in this areas are not accustomed to planting vegetables, only occasionally consume wild vegetables and alfalfa and use salt and hot pepper with their meals all year round.

The environmental characteristics described above may serve as a basis for the exploration of the causes of Kaschin-Beck disease.

[See Figure 1, following page]

III. Correlation Analysis of Kaschin-Beck Disease and Environmental and Geological Factors

The occurrence of an endemic disease is always related to the environment in which people live. The environment is very complex but can be roughly divided into three categories: the natural envirnoment, the social environment and the economic environment. Factors influencing the health of residents may exist in each of these environments.

There are many views regarding the cause of Kaschin-Beck disease. We therefore conducted a general survey of the factors generally believed to influence the severity and epidemiological trends of the disease. The purpose of the study was to find out whether we have sufficient data for an investigation of the environmental causes of the disease.

We conducted environmental and geological investigations in 116 natural villages, collected and analyzed 188 water samples from 173 infected areas and 15 uninfected areas and investigated all types of factors. We studied such natural factors as weather, hydrology, geology, geomorphism and water source and quality; such social factors as major social changes, changes in the economic system, variations in cropping, population increases and migration; and such economic factors as income, grain rations, dietary variety ratios and nonstaple consumption levels.

We processed the data collected in the investigation and tried to employ quantitative indicators wherever possible. After analyzing and studying the relationship between Kaschin-Beck disease and these environmental indicators, we found that the correlations of geomorphism, water supply and water quality were the most significant. We then conducted significance tests correlation analyses.

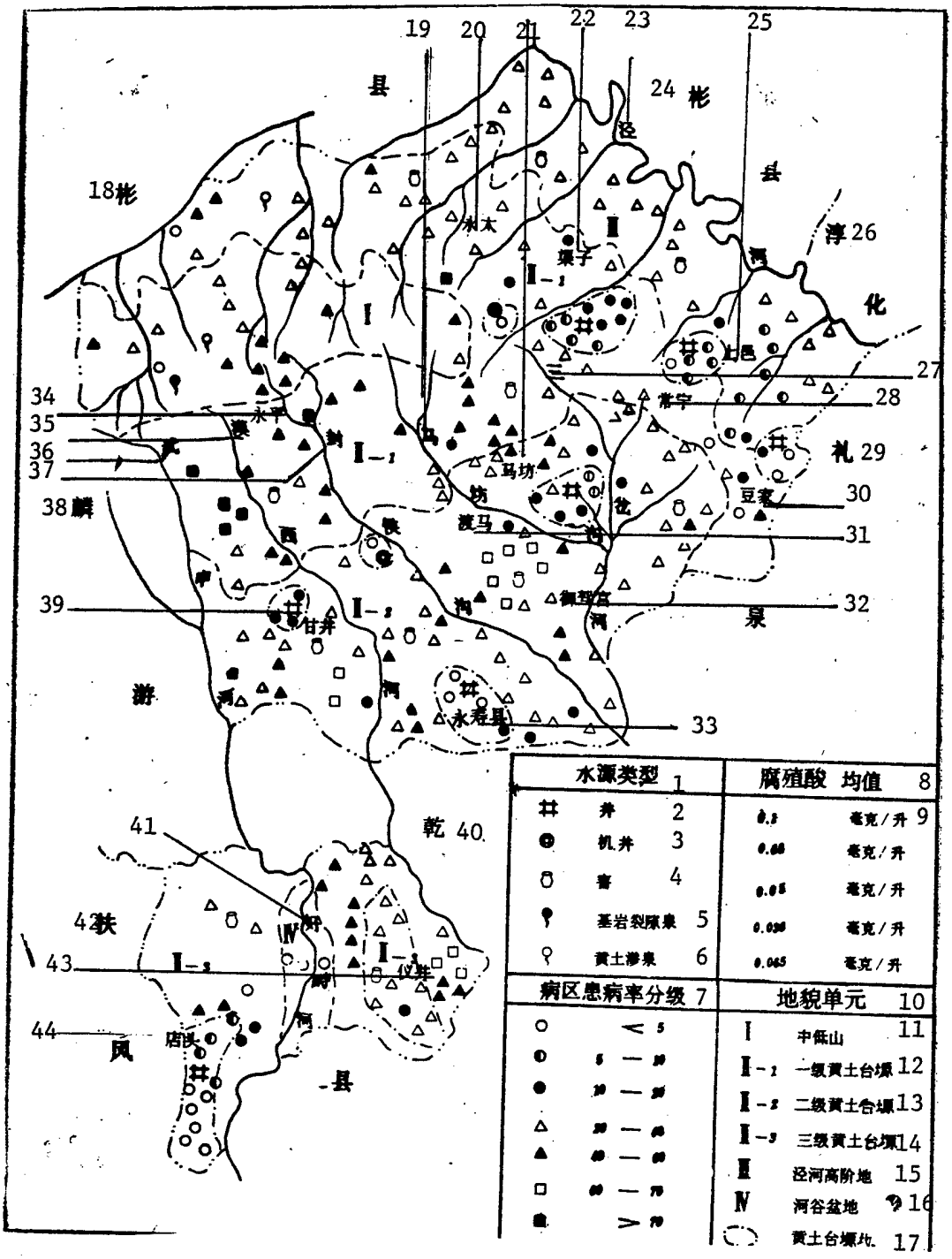

Figure 1. The Natural Environment and the Distribution of Kaschin-Beck Disease

[Keying on following page]

Key to Figure 1:

1. Type of water source
2. Well
3. Mechanized well
4. Cellar
5. Bedrock fissures spring
6. Loessial osmotic spring
7. Incidence levels
8. Humic acid (average)
10. Geomorphism
11. Low-and medium-altitude mountains
12. First-tier loessial terrace
13. Second-tier loessial terrace
14. Third-tier loessial terrace
15. Jing He highland
16. River valley basin
17. Loessial terrace
18. Bin County
19. Mafanggou
20. Yongtai
21. Mafang
22. Quzi
23. Jing He
24. Bin County
25. Shangyi
26. Chunhua County
27. Sancha He
28. Changning
29. Liquan County
30. Doujia
31. Duma
32. Yujiagong
33. Yongshou County
34. Yongping
35. Moxi He
36. Wushen He
37. Fenghou Gou
38. Linyou County
39. Ganjing
40. Qian County
41. Haozhi He
42. Fufeng County
43. Yijing
44. Diantou

1. Chi-square ($\underline{x}^2$) Test: Analysis of the Influence of Geomorphism and Microgeomorphism on the Incidence of Kaschin-Beck Disease

In Yongshou County, the relationship between Kaschin-Beck disease and geomorphism and microgeomorphism is very evident. There are often pronounced differences in the severity of the disease between opposite sides of rivers or gulches, between hilltops and hill bottoms, betweeen the top or slopes of the loessial terrace or even betweeen the eastern or weatern parts of a single village. There are even "islands of health" inside infected areas.

In our study of natural villages with different geomorphisms, we discovered pronounced differences in the incidence of the disease. This phenomenon has been intuitively recognized by the people, In order to test the significance of such differences, we divided these villages into four groups: high-incidence villages, medium-incidence villages, low-incidence villages, and healthy villages. For each geomorphism, we tabulated the percentages of villages within these four classifications. Then we conducted chi-square tests. The chi-square procedures compares several groups of relative numbers; in other words, it is a test of the significance of the difference between two or more frequencies. (The calculations are omitted from this papers.) The results are listed in table 1.

Table 1. Geomorphic Distribution Differences Among Village Groups

Village Groups / Geomorphism	Healthy Incidence= 0 %		Low Incidence Incidence= < 20%		Medium Incidence Incidence= > 20-50%		High-Incidence Incidence= 50%		TOTAL
	No	%	No	%	No	%	No	%	
Low medium mountains, I	1	71.4	3	21.4	8	57.1	2	14.38	14
Loessial terrace, II-1	2	2.4	24	29.76	40	48.8	16	19.5	82
II-2	1	.95	21	20.00	56	68.2	27	32.9	105
II-3	--	---	22	44.	24	48.5	6	11.5	52
Jing He highland, III	--	---	8	28.6	18	64.2	2	7.14	28
River-valley basin, IV	--	---	2	100.	--	----	--	----	2
Total	4		80		146		53		289
Significance test	$X^2 = 29.83$				$p < 0.02$				

The chi-square test showed that village incidences varied greatly among different geomorphisms. As can be seen from table 1, high-incidence villages are mostly distributed on the second and first tiers of the loessial terrance (II-2, II-1), and in low or medium mountains (I). Low-incidence villages are mostly distributed on the third tier of the loessial terrace (II-3) and in river-valley basins (III).

The geomorphic differences in the distribution of Kaschin-Beck disease directly reflect the richness of water supplies in water-bearing strata. Generally speabing, low-incidence villages are mostly distributed in alluvial regions and in region where bedrock fissure water is well developed.

High-incidence villages are mostly distributed in some areas of the loessial stratums having upper-layer stagnant water, low water permeation, deeply buried water or poor water supplies in water-bearing strata.

The correlation between Kaschin-Beck disease and microgeomorphism is even more pronounced. This is particularlyhighlighted by the differences among the top of the loessial terrace, terrace slopes and river-valley basins. Chi-square tests were conducted to measure the significance of such differences, and the results are shown in table 2.

[Table 2 on following page]

Table 2. Microgeomorphic Differences Among Village Groups

Village Groups / Microgeomorphism	Healthy Incidence = 0		Low Incidence Incidence < 20%		Medium Indidence Incidence 20-50%		High Incidence Incidence > 50%		Total
	No	%	No	%	No	%	No	%	
Top of terrace			43	64.2	24	35.8			67
Terrace slopes			12	7.1	105	62.5	51	30.35	168
Bottoms of valleys	2	50	2	50.0					4
Total	2		57		129		51		239
Significance test	$X^2 = 214.07$				$p < 0.001$				

Table 2 shows that of the 67 villages on the top of the loessial terrace, 43, or 64.2 percent, have low incidences; 24, or 35.8 percent, have medium incidences; and none have high incidences. Out of the 168 villages on terrace slopes, 51, or 30.35 percent have high incidences; and 105, or 62.5 percent have medium incidences. Together, there are 156 high- and medium-incidence which account for 82.85 percent of the total; and only 12 villages or 7.1 percent, have low incidences. No high- or medium-incidence villages were found in river valleys. The chi-square test showed that the differences among these rates were extremely significant.

Microgeomorphic differences in disease distribution directly reflect differences in drinking-water sources. On terrace slopes, where most drinking water is derived from cellars, the disease is severe. On the top of the loessial terrace, where drinking water comes mainly from wells, the disease is not as serious. In river valleys, drinking water comes from springs, rivers and wells, and thus incidence is either low or zero.

2. The t Test: Analysis of the Relationship Between the Sources of Drinking Water and Kaschin-Beck Disease

During the Yongshou survey, the masses everywhere reported that the severity of disease varied greatly for people using different sources of water. Evidence of this relationship is ubiquitous.

Incidence is high among people who drink water from cellars and osmotic wells, but the disease is not so serious among people who drink from earth wells. Even among drinkers of spring water, incidence differs greatly because there are different types of spring water. Loessial osmotic spring-water drinkers seriously suffer from Kaschin-Beck disease, but drinkers of rock-fissure spring water are almost all healthy. Loessial osmotic springs are mostly located on the slipes of the loessial terrace or near ditches, where small quantitites of water slowly seep out of the loessial layer. Around these springs, the ground is low and wet, weeds grow unchecked and loess converts into humus and contaminates the water, whose surface becomes covered with an oily film. Loessial osmotic well conditions are similar, the only difference being that one source is exposed and the other is not.

In order to compare incidences among people using different sources of water and to determine the significance of the differences among these incidences, we selected the t test. This test proved to be useful for the study of the causes of the disease.

The results are given in table 3.

Table 3. t Tests of Incidences Among Drinkers of Different Water Sources

检验组数[1]	水源类型[2]	总数[3]	均值[4]	范围值[5]	T值[6]	概率[7]分布	显著性[8]
1	客[9]	137	62.09±1.304	16.5—79	7.65	P<0.01	差异非常显著[13]
	渗[10]井	74	21.3±1.84	6.4—64.9			
2	渗[11]泉	16	36.37±?.44	10.7—61.5	5.67	P<0.01	
	基岩[12]泉	3	2.14±0.66	0—6.5			

Key:

1. Group
2. Type of water source
3. Total number
4. Mean
5. Range
6. t
7. Probability distribution
8. Significance
9. Cellar
10. Osmotic wells
11. Osmotic springs
12. Rock springs
13. Differences are very significant

Table 3 shows that for cellars and osmotic wells the t value was 7.65, p was less than 0.01 and incidence differences thus were highly significant. For osmotic springs and rock-fissure springs, the t value was 5.67, p was less than 0.01 and incidence differences thus were again highly significant. This shows that incidences among people drinking water from different sources are indeed very different.

3. The t Test: Analysis of the Relationship Between Drinking-Water Quality and Kaschin-Beck Disease

We conducted environmental and geological studies of all major Kaschin-Beck disease regions in China and collected and analyzed many water samples. A total of 20 tests were made for HCO_3, Cl, SO_4, NO_3, Ca, Mg, Na, K, F. SiO_2,

mineralization, hardness, humic acid (-OH), $KMnO_4$ consumption, Ba, Sr, Cu, Pb, Zn, Cd, and the total amount of hunic acid. (The last seven tests were made by the National Kaschin-Beck Disease Geological Survey Group.)

Statistical analysis of these water quality data showed that humic acid (-OH) content and $KMnO_4$ consumption differed greatly between infected areas and uninfected areas. The Changchun Institute of Geography of the Chinese Academy of Sciences tested similar water samples with ultraviolet spectrophotomery for the total amount of humic acid and found the same trend as that for humic acid (-OH) content. No other tests showed such differences. Test data for the Yongshou infected area showed similar results: differences in humic acid (-OH) and total humic acid contents and $KMnO_4$ consumption were very significant.

t tests were conducted for humic acid (-OH) in the drinking water taken from infected areas, uninfected areas, and high-incidence, low-incidence and healthy villages. Water samples were selected in such a manner that the differenees in internal contrasts and in external contracts could be studied. Internal contrast refers to the contrast among high-incidence, low-incidence and healthy villages in an infected area. This comparison emphasizes measurement of differences in the severity of the disease. Villages so compared had to be located as closely together as possible and generally were 0.5 to 2 kilometers apart. This method of paired sampling helped to reduce the scope of the study and to reveal significant differences. Naturally, there could not be very many such pairings, and only 12 were obtained in the Yongshou infected area.

External contrast is a comparison between the Yongshou infected area and adjacent uninfected areas, such as Qian and Wugong counties. The purpose of this comparison was to identify the differences between infected and uninfected areas and the difference, if any, between low-incidence and healthy villages in the infected area and villages in uninfected areas.

We collected 10 water samples at random from 10 villages in uninfected areas and compared these samples with 10 others collected from the infected area. In order to make the statistical results more valid, we used the median test to select 10 water samples from 177 samples collected in the infected area. The results of the t tests are given in table 4.

Table 4. t Tests of Humic Acid (-OH) in Drinking Water

Type of villages	No	Mean	Range	t	Probability	Significance Test
Low incidence or healthy	12	0.0498±0.033	0.02–0.14	4.002	$P<0.001$	Differences are very significant
High-incidence	12	0.0554±0.378	0.06–1.23			
Uninfected areas	10	0.022±0.002	0.02–0.04	16.73	$p<0.001$	
Infected area	10	0.283±0.015	0.2–0.374			

Table 4 shows significant differences between the humic acid (-OH) contents of drinking water in high-incidence villages and in low-incidence or healthy villages: $t = 4.002$ and $p < 0.001$. It should be pointed out that the humic acid (-OH) content of drinking water in low-incidence or healthy villages (0.049 mg/l) is relatively close to that of uninfected areas (0.022 mg/l), which is in line with that of the islands of health in the infected area (0.02 mg/l).

We conducted t tests of $KMnO_4$ consumption in two groups of water samples, 98 samples from the infected area and 21 samples from uninfected areas. The results, $t = 3.53$ and $p < 0.001$, indicate that the difference between the two groups is significant. See table 5.

Table 5. t Tests of $KMnO_4$ Consumption in Drinking Water

Group	No Samples	Mean	Range	t	Probability Distribution	Significance
Drinking water from the infected area	98	2.599 ± 0.24	0.08-9.54	3.53	$p < 0.001$	Differences very significant
Drinking water from healthy areas	21	0.723 ± 0.17	0.01-4.31			

The influence of water source and water quality on Kaschin-Beck disease has long been recognized by the masses in the infected area. The t test, however, reveals the closeness of these relationships even more clearly, and figure 2 reflects them even better.

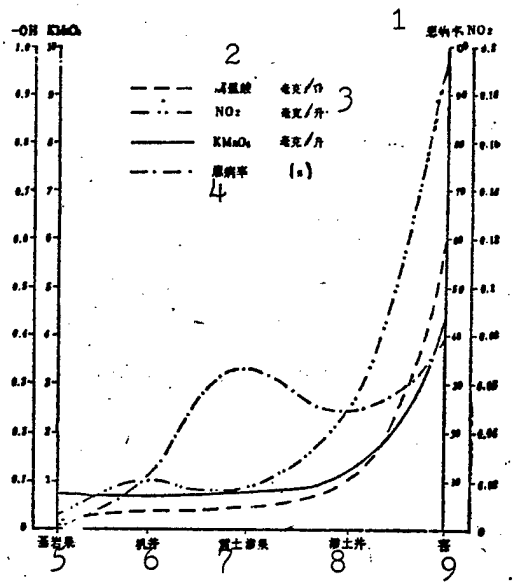

Figure 2. Relationships Between Incidence and Water Source and Water Quality

Key:

1. Incidence
2. Humic acid
3. mg/l
4. Incidence
5. Bedrock spring
6. Mechanized well
7. Loessial osmotic spring
8. Loessial well
9. Cellar

Figure 2 shows the correlation between water quality and incidence for 123 water sources. As can be seen, humic acid (-OH) content and NO_2' and $KMnO_4$ consumption are closely related to water-source type and are directly proportional to incidence. This shows that the higher the organic contamination of drinking water, the higher is the incidence of Kaschin-Beck disease. NO_2' is also an organic pollution indicator and parallels humic acid and oxygen consumption.

4. Correlation and Regression Analyses: The Relationship Between Humic Acid (-OH) Content in Drinking Water and the Incidence of Kaschin-Beck Disease

To demonstrate the relationship between humic acid (-OH) content in drinking water and the incidence of Kaschin-Beck disease, the authors conducted correlation and regression analyses of incidence (ŷ) and drinking-water humic acid (-OH) content (x) for 148 natural villages. The results are shows in table 6 and figure 3. [See next page]

Table 6 shows that the correlation coefficients of the exponential and parabolic regressions are insignificant but that the logarithmic and linear equations, especially the former, have very significant correlation coefficients. This means that the correlation between humic acid (-OH) content in drinking water and the incidence of Kaschin-Beck disease in the Yangshou infected area is logarithmic or linear.

This is an important conclusion which expresses the relationships with a mathematical model.

IV. Conclusions

This study leads to the following conclusions.

1. The incidence of Kaschin-Beck disease in natural villages in the Yongshou infected area is closely related to geomorphism and microgeomorphism. Incidence is low on top of loessial terrace, high on terrace slopes, high in mountain canyons and low in river valleys. Our statistical study has quantified these qualitative concepts.

2. The influence of geomorphism, and microgeomorphism on Kaschin-Beck disease is mainly manifested in drinking water type. Incidence is high for drinkers of cellar water and osmotic spring water and low for drinkers of well water and bedrock fissure spring water. Our statistical study has also quantified these qualitative notions.

3. Through correlation and regression analysis, we found the relationship between Kashin-Beck disease and the humic acid content in drinking water to be logarithmic or linear and highly significant. It must be pointed out that correlation confirmed in the pure statistical sense does not necessarily mean causality. To demonstrate a causal relationship, we must undertake concrete analysis. However, through our long experience in environmental hydrogeological investigation and in disease prevention through water improvement, we believe that this correlation may well be linked to causality. The results of this study are therefore very important for the investigation of the cause of the disease.

Table 6. Correlations Between Incidence and Humic Acid (-OH)

Statistical Method	Regression Equation	Regression Coefficient a	Regression Coefficient b	Correlation Coefficient	Probability Distribution	Significance
Linear regression	$y = a - bx$	30	13	0.225	$p < 0.01$	Correlation is highly significant
Logarithmic transformation	$y = a + b\ (\ln x)$	45.3	5.8	0.387	$p < 0.01$	
Exponential regression	$y = a(e^{bx})$	3.3	.63	0.138	$0.05 < p$	No significant correlation
Parabolic regression	$x - ay + by^2$	.03	.001	0.026	$0.05 < p$	

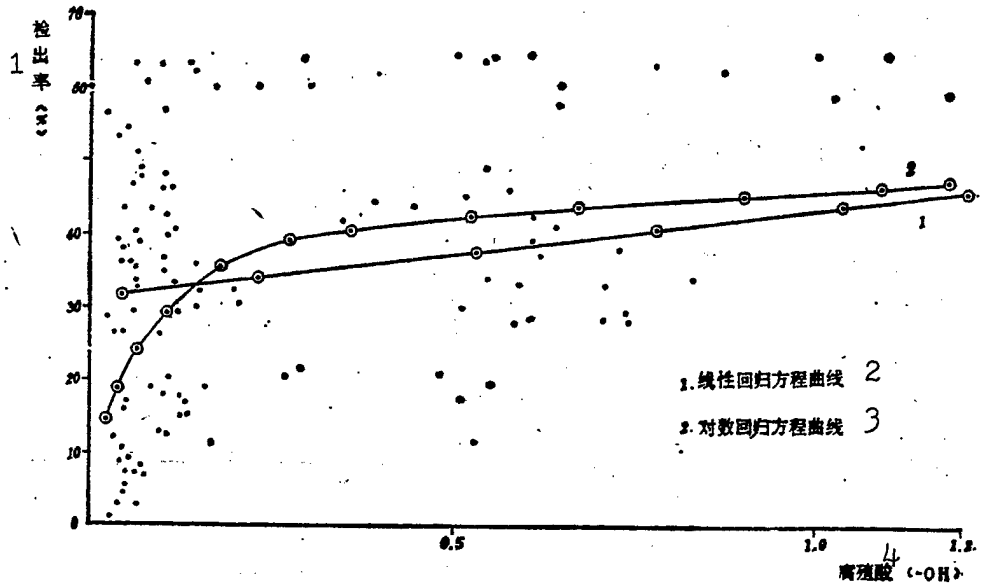

Figure 3. Incidence-Humic Acid (-OH) Regression Curves

Key: 1. Incidence
2. Linear regression
3. Logarithmic transformation
4. Humic acid (-OH)

We believe that the isolation, identificiation and extraction of humic acid (-OH) and animal tests provide important means by which we can further the study of the causes of the disease.

4. This study can help us select and establish for infected areas new settlement locations that have suitable geomorphic conditions and water supplies. Undesirable environmental conditions and water sources may be improved, or new sources may be found. Using the results of the study, we propose the following standards for the improvement of water quality and the prevention of Kaschin-Beck disease. See table 7.

Table 7. Water-Quality Standards for the Yongshou Infected Area

Humic acid (-OH) (mg/l)	$KMnO_4$ consumption (mg/l)	Water Quality		Contamination	Incidence
0.02	$\leqslant$0.5	good	healthy	none	none
0.02-0.05	0.5-1.0	fair		slight	none
0.05-0.10	1.0-1.5	poor		medium	none to low
0.10-0.20	1.5-3.0	bad	Not	heavy	medium
0.20-0.40	3.0-4.0	very bad	healthy	severe	high
0.4	> 4.0	extremely bad			

We believe that Kaschin-Beck disease can be effectively prevented in the Yongshou infected area if the humic acid content and the $KMnO_4$ consumption in drinking water is limited to less than 0.02 mg/l and 1.0 mg/l, respectively. This standard is also applicable to other infected areas in China.

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9698
CSO: 5000/4180

SEXUALLY TRANSMITTED DISEASE 'BECOMING RAMPANT' AMONG WOMEN

Manila BULLETIN TODAY in English 30 Mar 84 pp 1, 14

[Text] A common yet relatively unknown sexually transmitted disease (STD) called trichomonas vaginitis is becoming rampant among Filipino women, particularly housewives.

Trichomonas vaginitis, a disease characterized by intense itching, a whitish, yellowish, or greenish discharge, and light bleeding can cause sterility and irritation of the cervix that could lead to cervical cancer, according to a study of the National Research Council of the Philippines.

The study disclosed that today, the disease is present in 12 out of 100 Filipino women compared to 10 cases out of 100 women examined in 1968.

The STD caused by a protozoan parasite called trichomonas vaginalis thrives on the surface of the vaginal lining in women while in men, it stays in the urethra and prostrate gland, although men do not manifest the symptoms.

The disease is transmitted through sexual contact with any infected person, sitting in infected toilet bowls, poor hygiene, and sharing of underwear and towels with a disease-carrier.

In a study of 368 women in Manila, 44 or 11.96 per cent were found positive for trichomonas vaginitis. The infection rate among hospitality girls was 14.8 per cent, and eight per cent among housewives and women belonging to middle socio-economic occupational groups.

Prof. Nonette L. Jueco, of the University of the Philippines Institute of Public Health department of parasitology, said the disease is more common than popular STDs such as herpes and AIDS which rarely occur, and syphillis and gonorrhea which have an infection rate of 2.16 per cent and 5.3 per cent, respectively, based on statistics of the Ministry of Health (MOH).

Trichomonas vaginitis is not given the importance it deserves because it does not cause any disabilities or deaths like other STDs, Jueco said.

The study was based on a swab examination made on patients of a private gynecological clinic and the Pasay Social hygiene clinic from November, 1982,

to August, 1983. It was authored by Jueco, Caridad Ancheta of the UPIPH department of epidemiology and biostatistics, and Elizabeth Tadina of the General Emilio Aguinaldo College of Medicine.

Women most frequently affected by the disease are reportedly those between 20 and 40 years old, the period when sexual activity is at its peak. Women nearing their menopause, however, are also prone since the vaginal fluid becomes less acidic as they age. The parasite, Jueco explained, does not thrive in an acidic environment.

Jueco added that women using the pill are less prone to infection because the pill produces acidity. A condom prevents the transmission of the disease.

In treating the disease, Jueco stressed that both the woman and the man with whom she has had contact must be treated. The most effective drug to kill the parasite is Metronidazole which, however, can be carcinogenic if taken repeatedly whenever the disease recurs.

CSO: 5400/4408

BRIEFS

INTESTINAL WORM INFECTIONS--Intestinal worms infect over a billion individuals in the world today, according to a report of the World Health Organization (WHO). In the Philippines, ascaris, which is a giant intestinal roundworm, was estimated to be present in about 20-million Filipinos, each harboring about 20 adult ascaris, according to Dr. Benjamin D. Cabrera, parasitology professor of the University of the Philippines Institute of Public Health. About 900 million of the world's population are infected by the worms, he said. In the latest issue of the WHO official magazine "World Health," Cabrera said that the Philippines has one of the highest prevalence rates for ascariasis, an intestinal infection cause by ascaris, which is often regarded as an indication of poor sanitation. Ascariasis has a prevalence rate of 85 to 90 per cent in the Philippines which is exceeded by Iran with 98 per cent. The disease is less prevalent in neighbouring developing countries such as Malaysia (82 per cent), Thailand (70 per cent), Indonesia (83 per cent), Taiwan (50 per cent), Korea (58 per cent), and Vietnam (45 per cent). [M. C. Rodriguez] [Text] [Manila BULLETIN TODAY in English 1 Apr 84 pp 1, 12]

CSO: 5400/4405

EPIDEMIOLOGICAL SITUATION OF INFECTIOUS DISEASES ASSESSED

Warsaw SLUZBA ZDROWIA in Polish 19 Feb 84 p 3

[Article by the Chief Sanitary Inspector, Dr Ryszard Brzozowski: "Infectious Diseases in 1984"]

[Text] I will describe the epidemiologic situation of the nation as regards infectious diseases based on the data currently available, which may be subject to slight corrections.

Evaluating the infectious diseases which are generally prevalent, we should note that 1983 was somewhat worse than 1982. This negative assessment comes mainly from a substantial rise in registered cases of viral hepatitis, dysentery, diarrhea in children under age 2 and deterioration of the epidemiologic situation of measles, mumps, trichinosis, German measles, chicken pox and scarlet fever.

It should be pointed out, however, that 1983 saw further improvement in the situation with typhoid fever. The registered number of cases was 74, which is the lowest on record. In 1983 (compared with the preceding year), improved indicators have been registered in whooping cough and the registered number of cases, 181, was a favorable statistic, because until now no year in Poland has had on record such a small number of instances of whooping cough. There was also an improvement in the epidemiological situation with tetanus, poliomyelitis, meningitis, encephalitis, typhus and scabies.

The situation in 1983 is described by data in the table on infectious diseases.

This is the general picture for the past year. As in previous years, the epidemiologic situation in individual provinces was different. In some provinces, the general situation is particularly unfavorable. I present the specific data on provinces in discussing the individual disease entities.

Table 1. Reported Prevalence of Infectious Diseases in 1982-83

Disease entity	Number of cases 1983	1982
Typhoid fever	75	79
Paratyphoid	8	5
Dysentery	5,791	1,337
Diarrhea in children age 2	30,604	27,588
Diphtheria	1	-
Whooping cough	181	469
Scarlet fever	13,758	11,453
Tetanus	116	124
Poliomyelitis	2	6
Meningitis	7,881	27,673
Chicken pox	198,798	125,092
Measles	11,282	7,668
German measles	18,583	14,007
Encephalitis	413	434
Viral hepatitis	61,821	50,207
Mumps	146,569	56,345
Typhus	2	5
Trichinosis	414	307
Scabies	31,882	44,236
Influenza	1,234,125	587,479
Food poisoning	10,903	11,051

Typhoid Fever

With this disease, we have achieved a consistent decrease in morbidity. The trend can be illustrated by comparisons: 1970, 419 cases; 1975, 276; 1980, 80; 1981, 98; 1982, 79; and 1983, 74. In 1982, 24 provinces registered not a single case of typhoid fever, and in 1983, the number of provinces free of this disease increased to 28. The general situation in the nation in 1983 reflects the incidence in the following provinces: Skierniewice, Sieradz, Ostroleka, Warsaw and Radom, where morbidity data were several times higher than the national average. Compared to other European nations, the epidemiology of typhoid fever places Poland in a favorable position.

Paratyphoid

As with typhoid fever, an improvement is observed over several years, although compared with 1982, 1983 registered a rise in reported cases of paratyphoid. The long-term trend presents itself as follows: 1970, 55 cases; 1975, 28; 1980, 10; 1981, 11; 1982, 5; and 1983, 8. Compared with other European countires, Poland's situation is favorable.

Dysentery

In 1983, four times as many people had dysentery as in 1982. Currently, the disease has a moderate form. Despite this growth, the incidence of dysentery in Poland is low. One should take into account, however, certain reservations concerning diagnostics, since the quality of bacteriologic diagnostics still remains largely inadequate. The highest incidence of dysentery in 1983 was registered in the following provinces: Elblag, Tarnow and Olsztyn. These provinces accounted for 36 percent of total dysentery cases in the nation taken together.

Diarrhea in Children Under Age 2

In 1983, a 10 percent rise of morbidity was recorded, as compared with the previous year. Special mention should be made of a group of seven provinces, where for many years (including 1983) the incidence of the disease was higher, sometimes by many times, than the national average. These provinces are: Tarnobrzeg, Jelenia Gora, Suwalki, Wroclaw, Walbrzych, Slupsk and Wloclawek.

Whooping Cough

The past year was one of the best. Favorable changes took place in the whooping cough epidemiology, as illustrated by these figures: 1970, 9998 cases; 1975, 1156; 1980, 232; 1981, 281; 1982, 409; and 1983, 181. Compared with other European nations, the situation in Poland is favorable. The greatest number of cases were recorded in Krakow and Nowy Sacz. In 1982, 11 provinces did not report a single case of the disease, and in 1983 this group grew to 16 provinces. In 1982, 23 percent of all instances were registered in Krakow Province, which accounted for 20 percent of total in 1983.

Tetanus

Between 1970 and 1983, the tetanus morbidity fluctuated in a narrow range from 89 in 1980 to 134 in 1970. In 1983, the highest morbidity of tetanus was registered in the following provinces: Tarnow, Czestochowa and Tarnobrzeg. These three provinces accounted for 24 percent of the national total.

Poliomyelitis

Over the past decade, 78 cases were identified in the nation, including 15 instances in the five years between 1979 and 1983; two of these occurred in 1983. In European nations generally, isolated cases of polio are recorded. In some countries (e.g., Spain), the incidence is slightly higher.

Meningitis

Compared with 1982, when a considerable rise in incidence had occurred, 1983 registered 3.5 times fewer cases of meningitis. An even stronger improvement was observed in the group of viral meningitis. The number of instances in 1983 was less than one-fifth of the 1982 figure. Only two provinces (Bialystok and Szczecin) had figures significantly higher than the national average.

Measles

In 1983, altogether 11,317 cases of measles were reported, meaning a 33 percent rise compared to 1982. Despite this growth, the 1983 figure was the second lowest (after 1982) in the years under study. The long-term measles distribution was the following: 1970, 125,572 cases; 1975, 146,664; 1980, 24, 882; 1981, 35,283; 1982, 7,668; and 1983, 11,282. Negative effects to the national figure in 1983 were contributed by high morbidity in the following provinces: Opole, Krakow, Piotrkow Trybunalski, Zamosc and Ciechanow. These provinces accounted for 48 percent of the national total. Some of the European countries have attained substantially better results in the fight against measles than Poland, but in most the epidemiologic situation is even worse.

Around 80 percent of children that should have received inoculation were actually vaccinated. This calls for intensifying the vaccination efforts.

German Measles

The number of cases of German measles increased in 1983 by about 25 percent compared with the preceding year. Most patients are children, especially in the age group of 5 to 9 years. In many nations, vaccination programs for German measles are in place. These programs encompass either children over 12 or those before puberty or susceptible adult women. In Poland, over 90 percent of women of childbearing age are immune to German measles. Experimental inoculations of girls aged 11-14 were undertaken in 1983. The results of this program will be known in the first quarter of 1984. The highest morbidity in 1983 in the following provinces: Legnica, Slupsk and Warsaw.

Viral Hepatitis

In 1977-81, a downtrend in viral hepatitis morbidity was observed in the nation. In 1982 and 1983, the situation became worse; this is particularly true of 1983, when a 19 percent growth in the number of cases compared with 1982 was observed. Particularly high incidence of viral hepatitis was registered in the following provinces: Lomza, Wroclawek, Siedlce, Ostroleka, Ciechanow and Radom.

Viral hepatitis is a major health, social and epidemiologic problem in Poland. Poland is one of the European nations with a high viral hepatitis prevalence.

Mumps

In 1983, a 2.5-fold increase in the number of cases was observed compared with the previous year. Mumps has for many years been one of the most widespread infectious diseases. Most cases are children under 14. The highest prevalence is observed among 6 and 7 year olds. Meningeal complications are observed in about 15 percent of patients. Residual phenomena and neurologic consequences are infrequent. Inflammation of the testicles, auditory nerve and pancreas are also rare. Inoculations with live vaccine are an important means of prevention. Inoculation is recommended for all children older than 12 months. It is also possible in adults and is recommended for adolescents in the prepubertal period (especially in boys) who before have not had mumps. Controlled vaccination programs will be initiated soon, and subsequently large-scale vaccinations will be conducted.

Trichinosis

In 1983, there was a 25 percent rise in the prevalence of trichinosis compared with the preceding year. The greatest number of cases registered were in the following provinces: Lomza, Pila, Bialystok, Slupsk and Radom. The infection is spread mainly through raw or undercooked meat, often of pigs and boars, as well as meat products--mainly sausage cured at low temperatures. Trichinoscopic inspection provides adequate preventive measures in the domestic conditions. Low temperatures (-18°C for at least 20 days) is also efficacious for destroying this parasite.

Scabies

A consistent decline in the incidence is observed for this disease entity. This is illustrated by the following figures: 1978, 118,174 cases; 1979, 99,395; 1980, 69,096; 1981, 50,935; 1982, 44,236; and 1983, 31,882.

Compared with 1982, last year saw a 28 percent decline of morbidity. The highest prevalence figures were observed in the following provinces: Chelm, Lodz, Wloclawek, Przemysl, Piotrkow Trybunalski, Biala Podlaska and Bialystok.

Implementation of the existing program will further improve the situation. Supplies of antiscabies medication are sufficient.

Food Poisoning

Compared with 1982, last year a small decline in the number of cases of food poisoning was registered. A numerically large group consisted of bacterial poisoning caused by Salmonella, with a much smaller prevalence of staphylococcal enterotoxins, botulism and mushroom poisoning. In the latter category, 385 cases were reported.

9922
CSO: 5400/3004

MEDICAL RESEARCHER WARNS OF SERIOUS AIDS EPIDEMIC IN COUNTRY

Stockholm DAGENS NYHETER in Swedish 9 Mar 84 p 12

[Article by Anna-Lena Haverdahl]

[Text] An AIDS epidemic may have broken out in Sweden by the time the next few years have passed. Even now, thousands of homosexual men may have been exposed to the disease, which has an incubation period of at least two years. But only a very limited portion of these people will actually contract AIDS.

This information was supplied by Lecturer Eric Sandstrom of Soder Hospital in Stockholm in an interview conducted by Tidningarnas Telegrambyra concerning the current debate on the AIDS threat in Sweden.

"There is, unfortunately, no evidence that we in Europe and Sweden will have an easier time with it than they have had in the U.S. Government officials, then, will have to plan for an AIDS epidemic. Until then, the only thing we can do is hope that infection hasn't been able to spread as much as we fear that it has," Sandstrom said.

AIDS stands for auto-immune deficiency syndrome, and involves a gradual breakdown in the body's immunity systems. The most minor infections, which the body normally can deal with easily, can have dangerous consequences for patients in the final stages of the disease.

In the U.S., there are currently over 3,000 cases of the disease, and in Europe approximately 300. According to Sandstrom, there are already definite indications in Western Europe that we can expect a similar development to what the U.S. has experienced.

"The AIDS curve in Europe looks like what they had in the U.S. two years ago," he said. "In the U.S. it started with individual cases, followed by an epidemic two years later, with thousands of people contracting the disease."

Genetic Makeup No Different

Sandstrom also pointed out that there are no genetic or other differences between us and the Americans which would indicate that we would escape the disease.

Eric Sandstrom was one of the persons who took the initiative in founding the now one-year-old open ward project for homosexual men, "Venhalsan" ("Health Friends"), at Soder Hospital. Since its opening in November 1982, a good 1,200 men have been examined there. Approximately one-fourth of these have been followed up and studied in detail. About 100 of these showed symptoms similar to those which characterize the initial stages of the disease.

This does not mean that everyone who has been exposed to the disease will also contract it. According to the American studies, only a small number of those exposed ever develop further symptoms.

"But the fact that there are so many people walking around with diffuse and serious symptoms is serious enough," Sandstrom said.

At about the same time as the "Venhalsan" program got under way, the first AIDS case was confirmed in Sweden. That was in the fall of 1982. Since that time, developments have been very disturbing, Sandstrom thinks.

Sicker All the Time

"The disease pattern among our patients has changed in an alarming way," he said. "The patients visiting us now are sicker all the time. The disease symptoms weren't nearly as clearly developed when we started the project a year ago last fall. The fevers, long-term diarrhea, and chronic infections are significantly more serious now."

According to Sandstrom, it continues to be the most health-conscious persons who currently visit the clinic. Most of them have had relatively few partners. In the real risk group for AIDS, it is not unusual for a person to have had 50 partners or more within the course of a year.

"But we haven't reached that group yet, and that worries me," Sandstrom said.

This is one of the reasons that it is hard to evaluate how large the infection-risk group actually is. The only thing that doctors have to go on is American research indicating that ten percent of the population is homosexual.

Sexually Active

Not counting underage persons, we have between 200,000 and 300,000 active homosexuals in Sweden. The majority of these probably maintain stable relationships. The persons who contracted the disease when it first came to Sweden were highly active sexually, but in recent years, persons living in stable relationships have also been affected. Neither doctors nor health officials know how large the actual at-risk group for the disease is.

Doctors also do not know how infectious the infectious material for AIDS actually is.

"The worst possible case would be that about half of Sweden's homosexual population has been exposed to the disease. Theoretically, hundreds of these could turn out to have contracted AIDS," Sandstrom said.

Eric Sandstrom is concerned that Sweden is not prepared for a possible AIDS epidemic.

"Government social services have more or less shrugged off the danger. The Riksdag officials, in contrast to the local assembly representatives, have not become involved enough," Sandstrom continued. "Funds which were promised earlier for mapping out the risk group for the disease have been withdrawn."

"Social services ought to take the initiative to build up a preparedness program, with clearly defined goals for mapping out the spread of the disease and its treatment. The group of medical experts that social services is using now functions only as an in-house informational organ," Sandstrom said.

But it is not only public officials and doctors who are obligated to do something. The homosexuals themselves are also responsible, first for themselves but also to society.

"The spread of all kinds of veneral diseases among homosexuals has become so extensive that we must have increased alertness with every new sexual contact. Each homosexual must observe regular health rules and avoid casual sexual contacts. Anal intercourse is especially dangerous in connection with this," Sandstrom added.

However, Eric Sandstrom is not yet ready to recommend closing down all the steam bath clubs.

"At least not yet," he said.

"The initiative in that case should come from the homosexuals' own organization, RSFL ('National Leage for Equal Sexual Entitlement').

"The important thing now is to try to affect behavior among homosexuals, and to raise the consciousness of health-care personnel. If we can reduce the number of infections among homosexuals in general, then we ought to be getting fewer cases of AIDS coming in," Sandstrom stated.

Social Services Remains Calm

The Social Services Office's expert on the AIDS issue, Bureau Chief Lennart Rinder, had a significantly more optimistic opinion of the possible development of further AIDS cases in Sweden.

"It is completely unlikely that we will be getting an AIDS epidemic of the scope that Eric Sandstrom is worried about," said Rinder to Tidningarnas Telegrambyra.

We will probably see an increase in the number of persons contracting the disease in the next two-year peiod, but how much of an increase is impossible to say, according to Rinder.

Lennart Rinder is the chairman of the group of medical experts appointed by social services in this area. He denies that Sweden's preparedness relative to this disease might be insufficient.

"We are definitely prepared throughout the health-care sphere as regards this disease. Doctors and health-care personnel down to the county level have been given information about the disease and its symptons, by means of lectures, classes and informational material," he said.

On the other hand, Rinder admitted that there may be some setbacks when it comes to the attitudes of health-care personnel towards these patients.

"We do all we can, but it takes time to change attitudes," he said.

9584
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COOPERATION WITH CAMEROON AGAINST RINDERPEST PLANNED

Kaduna NEW NIGERIAN in English 2 Mar 84 p 16

[Article by Victor Attai]

[Text] NIGERIA and Cameroun are to launch a joint vaccination campaign against rinderpest. They would be assisted by the Food and Agricultural Organisation (FAO).

For this reason, the FAO has already dispatched two teams of experts--one to the Cameroun and one to Nigeria--for on-the-spot study of the problems before launching the joint campaign.

This was disclosed by the Minister of Agriculture and Water Resources, Dr. Bukar Shaib on Wednesday in Lagos in a speech he made during the presentation of one million doses of rinderpest vaccine by the British High Commissioner in Nigeria., Mr. Ham Whyte.

He said the FAO had also donated two million doses of rinderpest vaccine and some equipment in order to expand vaccine production at the National Veterinary Research Institute at Vom in Plateau State.

Dr. Bukar said Nigeria had also placed orders for a further two million doses of vaccine from Kenya.

Earlier in his speech the British High Commissioner had noted the pontential effects on crop yields and meat supply caused by drought and rinderpest in the north and some other parts of Nigeria.

Mr. Whyte commended the Federal Livestock Department on the vital job being done and confirmed that his government would help in the campaign to control and eradicate the disease in Nigeria.

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SHARP INCREASE IN NUN MOTH POPULATION THREATENS FORESTS

East Berlin SOZIALISTISCHE FORSTWIRTSCHAFT in German No 3 Mar 84 pp 70-71

[Article by Prof. Dr E. Templin, Institute for Forestry Sciences Eberswalde, Center for Forest Plant Protection: "Massive Increase of the Nun Moth (Lymantria monacha L.) and Preparation of Counter Measures"]

[Excerpts] The nun moth, which has spread over the eastern to the central European plains since 1975, is thrusting west. Mainly pine forests on a 135.000-hectare area were overcome by massive increases in 1983 on GDR territory. As a basis for setting up counter-measures this year, biological and gradational data will take experiences gained thus far into account.

General Situation

The physiological weakening of forests, affected by complex abiotic, anthropogenous factors and caused by biotic factors, as increasingly observed for more than two decades, was drastically aggravated by the extreme weather picture since 1975. Phases of drought in the vegetative periods, continuing even in autumn months (1975, 1976, 1982, 1983), accompanied with high above-average temperatures, especially burdensome even through winter months (mainly 1975, 1976, 1983, 1984) caused the woods vitality losses by leaps and bounds and thus reduced their natural resistance to attacks by insects and fungus. Mainly pines in the Central European plains are intermittently caught by the big pests known as "game killers."

The Course of the Massive Increase of the Nun

The first indications of an increase in the making came between 1975 and 1978 in the USSR (Kaliningradsk Region and the Lithuanian, Byelorussian and Ukrainian SSR), in Poland (regional administration of the state forests of Olsztyn and Torun), in the northern plains of the GDR and in the FRG (Lower Saxony and Bavaria). Up to 1981 the gradation maximum lay in the eastern part of the affected area but spread west in 1982 via Poland (an area treated there of 2.3 million hectares, in the contiguous GDR border area, 10,700 hectares). Since 1983 one has observed a retrogradation beginning in eastern Poland but a progressive eruptive increase in the GDR (Polish area under treatment 1.37 million hectares, GDR 135,000 hectares, localized in the bezirks of Rostock, Neubrandenburg, Frankfurt/Oder and Cottbus).

For 1984, a cohesive increase area is emerging with strongly heterogeneous population densities in central western Poland (Gorzow and Zielona Gora provinces) and in the GDR (to the north, roughly to Prenzlau, Neubrandenburg, Goldberg, to the west, across Bad Wilsnack along the Elbe to Tangermuende, Genthin, southern direction to Flaeming, Lusatian border wall, to the Schwarze Elster, Bad Muskau).

Massive Change

Except for the yew-tree, ash-tree, robinia, red alder and the horse-chestnut, the greatly polyphagenous caterpillars eat of all commercial types of woods we have grown, most frequently of the oak, beech, hornbeam and birch among the deciduous trees, and of the pine, spruce and larch among the conifers. The massive change and grub preference greatly depend on physiological conditions and the resistance capability of tree varieties governed by them. In the latency period of its increase the nun moth prefers deciduous forests, in pine and spruce areas, permanently physiologically weakened stocks. In vital conifer stocks, the moth shows up seldom in the "iron ration." After large-scale stress, mainly because of climatic factors, the population increases greatly in pine and spruce forests which already had a latent population and an increasing migration from deciduous to conifer stocks.

Economic Significance

The pine: dying after the needles drop off even only once, with cellular damage causedby radiation after the loss of needles.

The spruce: when old needles are off once and May shoots make for grub, parched wood becomes widespread. Deciduous trees and larch show losses in new growth.

All age groups and qualities are in jeopardy, cultures too because of the drifting in of large population densities of the caterpillars. Small areas of individual pines and spruces in deciduous forests are especially endangered by excess increases. The same holds true for deciduous trees, e.g. birches, in conifer forests.

Setting Counter Measures

Because of the polyphagia of the nun, as a rule highly heterogeneous biotopes, including drinking water protected areas, river bank zones, and nature protection or settlement areas even outside of complex wooded areas are afflicted. To shore up well-timed counter measure schedules while paying attention to the therapeutic, ecological and hygenic requirements, areas to be worked have to be accurately determined and mapped on the basis of the above mentioned overseeing measures.

The heterogeneity of the afflicted areas requires close cooperation by forestry with local administrative organs and health facilities, adjacent agriculture and horticulture, fish breeders, bee-keepers, recreational facilities and others.

When density is high, even larva eggs destroying the May shoots can cause considerable economic damage. In such areas counter measures must be introduced in as well-timed a manner as possible.

The control areas to be worked on must eliminate mass populations on the largest possible acreages to preclude new settlements (moth overflights) and the need for multiple spraying.

The setting down and demarkation of control areas must take account of the physical and sanitary situation at large. That includes, among other things:
--assessing the status of vitality of the endangered stocks, after permanent physiological stress frequently made out by their leafy condition (number of needle generations, length, decoloration). Critical theshold values have to be lowered in conformity with the reduced leafy mass.
--Overlapping appearance of other damage factors, especially regarding more needle losses to be expected (here also a revision of the threshold values) or the chance of taking counter measures having multiple effects.

Because of the wide spread and diversification of forest areas threatened by the nun or mixed populations of other leaf ingesting pests, priorities have to be observed for the counter measures.

--Absolute priority: extremely high population density (more than 3,000 larvae per tree-top); simultaneous excess increase of the pine bombycidae, Dendrolimus pini L. (more than 100 larvae per tree-top) or of the pine moth, Panolis flammea Schiff. (over 200 eggs per tree-top).

--Priority: high population densities (over 1,000 larvae per tree-top), pine leafing below 0.7; high spruce proportions; ecological or economic concerns (waiting intervals, adjacent settlements and others).

--Delayed: conspicuous pathological symptoms (the larva not freeing itself from the egg, dead of limp larva); deciduous trees (watching the growth years); and relatively low infestation (less than 500 larvae per tree-top).

5885
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NOTICE ISSUED ON INSECTS, CROP DISEASES

OW011215 Hanoi Domestic Service in Vietnamese 1100 GMT 31 Mar 84

[Text] The plant protection department has issued a notice on the current status of harmful insects and diseases as follows:

In the northern provinces, the early 5th month-spring rice is developing vigorously, and the late rice is regaining vigor. There have been many days with overcast skies, heavy clouds, little sunshine, or sporadic rains. Rice blast, which is vigorously developing in early 5th month-spring rice patches in the zone four provinces, is affecting small patches of areas in Hai Hung, Haiphong, Thai Binh, and so forth. Its ravage in the Mekong Delta provinces has decreased.

Stem borders and caterpillars have appeared in small patches of areas in Ha Son Binh, Nghe Tinh, Hanoi, Hai Hung, Quang Ninh, and so forth, with average density of 0.07 to 0.2 worms per square meter. The average degree of density is from 1 to 3 worms per square meter on the late winter-spring rice in the Mekong Delta provinces; from 0.2 to 1 worm per square meter in the central coastal provinces. Leaf folders have reached an average degree of density of 3 to 5 worms per square meter. Caterpillars have appeared in small patches of areas in the northern provinces. Besides, armyworms are causing ravage in An Giang, Hau Giang, and Dong Thap provinces; rice planthoppers in the central coastal areas; and root suffocation disease in the northern provinces. In Dien Bien, fruit flies and thrips are ravaging small patches of areas of the late rice. Regarding other types of crops, black cutworms, corn ear worms, and cirphis slebrosa are continuing to ravage vegetables and secondary crops in many areas. Leguminous pod borers affecting soybean plants have begun to develop, with an average degree of intensify of 1 to worms per square meter. Powdery mildew is ravaging 15 to 20 percent of cultivated areas in Hai Hung; common scab from 3 to 7 percent on the average.

Forecasts of ravage by harmful insects and diseases for the coming period:

a. Northern provinces: Rice blast will continue to develop and ravage larger areas of 5th month-spring rice, especially in NN-8, NN-75-10, IR-1561 rice patches, and so forth. Rice leaf beetles, thrips, root suffocation disease, and fruit flies will ravage larger areas. Stem borers and leaf holders will begin their ravage on the early rice beginning late March. Leguminous pod borers, plant louses, diamondback moths, and powdery mildew, with a higher degree of intensify, will continue to ravage vegetables and secondary crops.

b. Southern provinces: Rice blast will continue its ravage on late winter-spring rice crop. Besides, rice armyworms will cause ravage in some localities.

In order to effectively control harmful insects and diseases affecting rice, vegetables, and secondary crops, it is suggested that all cooperatives in the northern provinces make regular checks on rice paddies in order to promptly detect rice blast. Application of nitrogenous fertilizer must be immediately stopped on pest-affected rice paddies, a proper water level must be maintained, and control with (kytasin) and (kynosan) insecticides, and so forth, must be carried out. Insect control must also be carried out on other crops, with special attention paid to the control of powdery mildew and rust affecting soybean plants. In the southern provinces, all measures must be taken to control rice blast, and insecticides must be applied to control stem borers, thrips, and leaf folders affecting the late rice. It is necessary to conduct regular checks for, and control of, harmful insects and diseases affecting the spring-summer and summer-fall rice seedlings.

CSO: 5400/4404

BRIEFS

INSECTS, PESTS DAMAGE CROPS--The mountainous provinces are continuing to transplant rice. In general, the already transplanted rice is growing well. However, harmful insects and rice pests have appeared in some areas. Rice blast has developed vigorously in the plains and in Region 4. Up to 12,000 hectares of rice in Nghe Tinh Province have been affected by rice pests. Butterflies metamorphosed from stem borers have appeared en masse in Ha Son Binh, Hanoi, Hai Hung, and Quang Ninh. Butterflies metamorphosed from leaf rollers have developed at a low rate in some areas. This year, the available amount of insecticides is small. Therefore, localities should now inspect rice fields, ready sprayers, and help each other to achieve good results. [Excerpts] [OW311017 Hanoi Domestic Service in Vietnamese 1100 GMT 30 Mar 84]

CSO: 5400/4404

END